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Is Tuberculosis Dying Out?

TODAY the death rate from tuberculosis is just a little more than one fifth of what it was at the beginning of the century. Whereas in 1900 there were 195 deaths from tuberculosis per 100,000 of total population living in the Original Death Registration States, it is estimated, on the basis of data so far available for 1938, that the corresponding death rate for this year will be about 43 per 100,000. As a result of this remarkable decrease in the death rate, about 200,000 persons will be alive on December 31st who, during the current year, would have succumbed to tuberculosis if the rate of 1900 still prevailed. The annual death rates from tuberculosis in the Original Death Registration States for each year from 1900 to 1938 (the last figure is estimated) are shown graphically in Fig. 1 on page 2.

The outstanding feature of Fig. 1 is the rapid and consistent decline in the death rates during the period of observation. The downward movement, however, has not been uniform throughout, for three distinct trends will be noted, namely, from 1900 to 1917, from 1918 to 1920, and from 1921 to 1938. In the short central period, into which fell the great influenza pandemic, 1918 to 1920, the decline was precipitous; in both the first and the third period, the average annual decline was three per 100,000 per annum. Our particular interest lies in the trend of death rates in the last period.

On the whole, the mortality from tuberculosis has been moving downward so uniformly from 1921 to 1938, that the curve of observed death rates on the graph is hardly distinguishable from the straight line trend (shown in dashes) for the series. A projection of this trend line to 1940 indicates that we may expect, at that time, a death rate from tuberculosis of 37 per 100,000 in the Original Death Registration States. This estimate may even turn out to be conservative. According to the trend since 1921, the expected fall in the death rate in the two years from 1938 to 1940 is about six per 100,000, though from 1937 to 1938 this amount of decline was achieved in the single year. When allowance is made for the slightly higher death rate from tuberculosis in the total United States, as compared with the Original Death Reg-

istration States, an estimated death rate from tuberculosis of about 40 per 100,000 in the country as a whole is found for 1940. Thus, as we come closer to the end of the present decade, we are accumulating evidence that the goal of a death rate of 40 per 100,000 in 1940, which we predicted in previous issues of the STATISTICAL BULLETIN, will be reached at the appointed time.

The improvement in mortality from tuberculosis among Industrial policyholders of the Metropolitan Life Insurance Company has been even more noteworthy than that in the general population. Starting with a death rate of 224.6 per 100,000 in 1911, the first year in the series of data available for these insured persons, the figure has fallen steadily, until, for the year 1938, a rate of 47 per 100,000 is indicated by the current experience. Compared with an average annual decrease of 3.0 per 100,000 in the death rate in the general population during the years from 1921 to 1938, Industrial policyholders have been experiencing an average annual improvement of 4.3 per 100,000 in that period. Although the death rates for the insured group lie consistently above those for the general population, the former are rapidly approaching the level of the latter. In fact, it is estimated that the two series of death rates will come together in 1940, when the Industrial policyholders and the general population in the Original Death Registra-

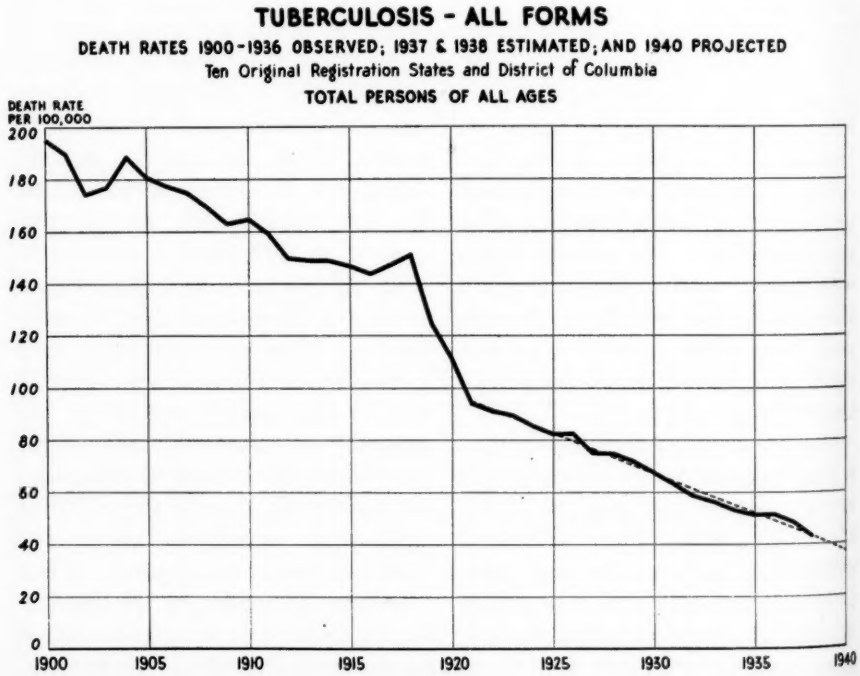


FIGURE 1

CORRELATION DIAGRAM

DEATH RATES PER 100,000 FROM TUBERCULOSIS
General Population in the Ten Original Death Registration States *
and Industrial Policyholders of the Metropolitan Life Insurance Company **
1921 TO 1938 †

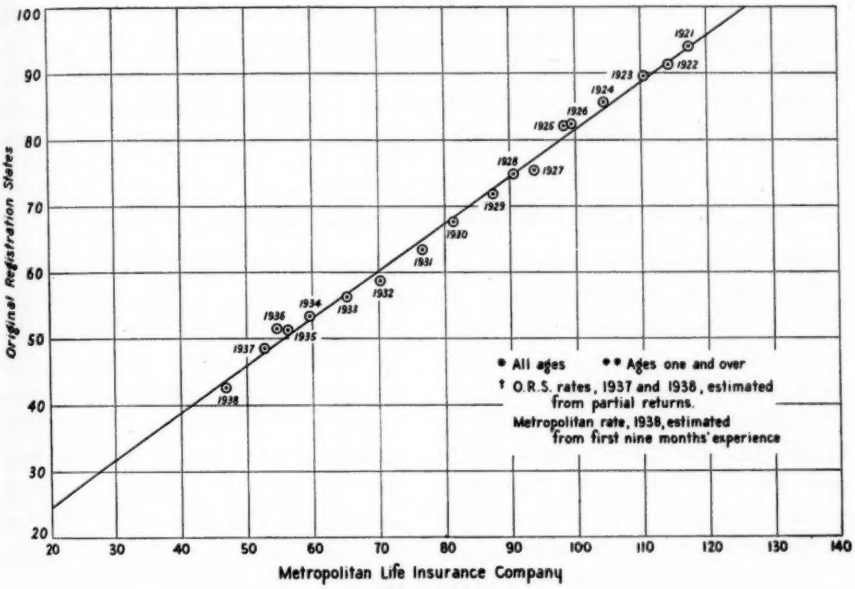


FIGURE 2

tion States will both have a death rate of about 37 per 100,000.

Throughout the period from 1921 to 1938, the death rates of Industrial policyholders and of the population at large have generally shown parallel year-to-year movements, notwithstanding their differences in level and in trend. In the scatter diagram, Fig. 2, which shows the relationship between the two series of death rates, it will be observed that the points fall very closely along a straight line; the coefficient of correlation, which measures the closeness of the relationship between the two series quantitatively, is found to be very high, namely, $.997 \pm .0014$. It is higher, for example, than the coefficient of correlation between the standardized death rate and the average length of life in the States of the Union ($-.992 \pm .002$), or that between the length of the first joint of the forefinger of the right and that of the left hand ($.925 \pm .004$).

Concentrated efforts of public health workers, both private and governmental, have produced results in the campaign against tuberculosis that reach far beyond the reduction in the death rate alone. Socially and economically, the gains to the country have been enormous. Innumerable homes have been saved from poverty and disruption. Many thousands, at the most productive ages of life, who otherwise would

have been sufferers from the white plague, are now working side by side, with us, in the daily tasks that are essential to the business of the community. Shall we, on the basis of these achievements, relax our efforts against tuberculosis? The answer is obvious: the battle is not over until the victory is complete. Our weapons are additional clinical facilities for diagnosis, more beds for open cases in communities where needed, a continued campaign of instruction regarding the treatment and life habits of those afflicted, better work facilities for arrested cases, and, last but not least, better living standards for the masses of people.

An Object Lesson on Infant Mortality

APPROXIMATELY two of every five deaths of white infants in the United States are unnecessary and preventable, according to the standards of New Zealand, the country with the lowest infant mortality in the world. In other words, we could save about 39,000 lives a year if we were as efficient as New Zealand is in thwarting infant mortality.

We have at times prided ourselves on our progress in reducing infant mortality by almost one half in the past 20 years. Comparison with New Zealand, however, shows that we are still 25 years behind that country in controlling this condition, for our rate at the present time is as high as was New Zealand's a quarter of a century ago. The higher death rate of infants in the United States, of course, has an important influence on the general death rate and is largely responsible for the fact that our expectation of life at birth for white persons is still 5½ years lower than it is in New Zealand.

It must be admitted that there are a few cities in the United States with infant mortality as low as New Zealand's, but for the country as a whole the rate for white infants is 66 percent higher than the rate for New Zealand. Even Oregon, the State with the lowest mortality, has a rate 26 percent greater than New Zealand's. This excess is found, in varying degree, throughout the first year of life and for most individual causes of death, despite the progress we have already made in reducing the death rate in this country.

How does New Zealand achieve its extraordinarily low infant mortality rates? The question is not an easy one to answer, and a complete explanation cannot here be offered. But some light on the problem may well be thrown by an examination of the death rates from specific causes in the first year of life, where particularly severe hazards to life are encountered. Indeed, comparison of the data for New Zealand with those for the United States does bring out very suggestive facts. Such comparison has been made for the United States as a whole and for seven selected representative States which had favorable infant mortality during the period covered, namely, Connecticut, Massa-

Deaths of Infants per 100,000 Live Births, by Cause of Death and for Certain Subdivisions of the First Year of Life. New Zealand as Compared with the United States (White Population) and Seven States (Total Persons) with Low Rates for the Period 1933 through 1935.*

Cause of Death, and Country	Under One Year	Under One Day	Under One Month	One to Two Months	Three to Five Months	Six to Eleven Months
All Causes of Death						
New Zealand	3200.2	842.7	2256.9	330.5	290.5	322.2
United States (White)	5304.8	1494.9	3174.8	729.1	630.3	770.6
Seven States (Total)	4910.4	1524.0	3096.0	633.3	538.5	642.6
Communicable Diseases of Childhood (7–10)						
New Zealand	93.6	—	6.9	19.3	33.0	34.4
United States (White)	194.4	0.3	13.0	52.1	45.1	84.2
Seven States (Total)	122.9	—	4.0	30.5	32.2	56.2
Diseases of the Digestive System (13, 117–119, 122b)						
New Zealand	123.9	—	12.4	33.0	44.1	34.4
United States (White)	583.2	0.7	78.3	132.4	164.6	207.9
Seven States (Total)	393.4	0.1	79.6	112.2	97.6	104.0
Respiratory Diseases (11, 23–32, 106–109)						
New Zealand	367.7	—	71.6	77.1	79.9	139.1
United States (White)	870.3	2.9	160.3	222.1	214.0	274.0
Seven States (Total)	850.6	2.8	145.4	209.3	214.1	281.7
Congenital Malformations and Diseases of Early Infancy (157–158, 161)						
New Zealand	918.5	162.5	709.2	111.5	57.8	39.9
United States (White)	918.4	242.1	690.1	116.4	65.9	45.8
Seven States (Total)	951.1	266.2	712.4	113.9	70.1	54.7
Premature Birth (159)						
New Zealand	1076.8	581.1	1049.3	24.8	1.4	1.4
United States (White)	1537.5	941.9	1487.9	39.2	8.0	2.4
Seven States (Total)	1494.4	913.0	1446.6	38.7	6.7	2.5
Injury at Birth (160)						
New Zealand	274.0	78.5	272.6	1.4	—	—
United States (White)	471.7	242.5	465.0	6.7	—	—
Seven States (Total)	555.0	310.1	547.9	7.1	—	—
External Causes (163–198)						
New Zealand	73.0	5.5	15.1	20.7	22.0	15.1
United States (White)	91.5	6.7	23.0	20.7	20.5	27.4
Seven States (Total)	81.5	9.3	23.1	15.3	20.3	22.9
All Other Causes						
New Zealand	272.6	15.1	119.8	42.7	52.3	57.8
United States (White)	637.8	57.8	257.2	139.6	112.2	128.8
Seven States (Total)	461.5	22.5	137.0	106.3	97.6	120.6

*Connecticut, Massachusetts, Minnesota, Nebraska, New Jersey, New York, and Wisconsin.

Note—Dash indicates no deaths. The numbers in parentheses indicate the titles in the International List of Causes of Death.

chusetts, Minnesota, Nebraska, New Jersey, New York, and Wisconsin. The comparison with these seven selected States is of particular interest, because it shows how far short of New Zealand's success our best efforts have brought us. The results of this comparison will now be considered, with reference to the table on page 5, which gives the pertinent facts in detail.

Probably the most important observation is that our only relatively favorable record is found in the group of causes which are particularly difficult to control. Thus the mortality from congenital malformations and debility, and from diseases peculiar to early infancy, is practically the same here as in New Zealand, namely 918 per 100,000 live births. In four of the States studied—Minnesota, Nebraska, New Jersey, and New York—the rate from this group of causes is actually lower than in New Zealand. For no other group of causes in infant mortality can this statement be made.

In contrast with this, for the remaining causes of death in infancy, all of which must be regarded as in some degree preventable, our mortality is consistently higher than New Zealand's. Among such essentially preventable causes may well be classed a good share of our deaths arising in connection with premature birth. The mortality from this cause is 43 percent higher in the United States, and injuries at birth had a mortality rate 72 percent greater in our population than in New Zealand. In reading these figures one recalls the findings of recent investigations from which it appears that poor obstetrical practice is largely responsible for our failure to attain the standards that should be within our reach. A singular and suggestive fact is that in the seven States selected for this study on account of their relatively low total infant mortality rates, the death rates from injuries at birth is nevertheless 18 percent higher than the average for the country as a whole. One hesitates to ascribe this situation to the effect of more frequent medical interference at childbirth in those localities where superior medical and surgical facilities are available.

Another important group of essentially preventable deaths in infancy are those from diseases of the digestive system. Here our mortality rate is almost five times that of New Zealand. Although we are today far ahead of our record of one or two decades ago, much still remains to be accomplished. Not quite so bad is the situation regarding the communicable diseases of childhood and the respiratory diseases, but for these our rate here is still twice that of New Zealand.

We could have no better object lesson before us in our efforts further to improve the situation, than that provided by New Zealand's record. Since the heaviest toll comes from congenital malformations, diseases of early infancy, premature birth, and injury at birth, substantial gains made in this group would be most effective in reducing the total infant mortality. Not long ago

the mortality from this group of causes of infant deaths was regarded as almost inevitable and unpreventable. Today we know better. Prenatal care of mothers and better obstetrical practice can accomplish a great deal in this field. On the other hand, though diseases of the digestive system are numerically less important as causes of death, we appear in a particularly bad light as compared with New Zealand with respect to these causes, for, as was noted above, our rates are almost five times those of New Zealand.

No comparison between two countries as widely separated as New Zealand and the United States can fairly be made with regard to isolated factors alone. Many circumstances undoubtedly enter and color the picture. Nevertheless, the similarity in the habits, customs, and general constitution of the two populations undoubtedly far outweighs their differences, so that we are on surely safe ground in looking upon the New Zealand record as a truly representative one for the United States to emulate.

Mortality Experience of the First Nine Months of 1938

THE mortality record for the first nine months of the year, for the Industrial policyholders of the Metropolitan Life Insurance Company, is the best in the history of the Company. Each month, so far, in 1938, has registered not merely a new minimum death rate, but a minimum well below the previous best record for that month. As a result, the cumulative rate for the year, to date, is 8.2 percent below last year's figure, which itself was a record for this season. The policyholders, both white and colored, in the United States and also in Canada have shared in this improvement.

The exceptionally low mortality which has obtained so far this year is a continuation of a series of records which began with May 1937. That is, for each month, not only this year but for the past 17 months, we have been able to announce a new low figure. What is more, September, like August of this year, has established a new low rate for any month in any year covered by our records. More than ever we are led to expect that 1938 will be a record health year for this large group of insured people. With 1938 as a basis the movement of the death rate from all causes over the last 16 years is exhibited graphically in the chart on page 9. Further details regarding the death rates from a number of causes in the first nine months of the year in 1937 and 1938 will be found in the table on page 10.

Such data as are available for the general population show likewise that country-wide health conditions throughout 1938 have been excellent. The Weekly Health Index of the Bureau of the Census reports only 324,718 deaths in 88 major cities, for 40 weeks of 1938, as against 349,032

in the same cities last year. This is a decline of 7.0 percent in actual deaths, in the face of a year's increase in population.

Several factors have contributed to the low mortality of the present year, the most obvious being the absence of any widespread influenza epidemic such as often occurs in the early part of the year. For with the decline in respiratory conditions, we find, associated, as usual, a decrease in deaths from the degenerative diseases and from the conditions related to pregnancy and childbirth.

Low Mortality from Influenza and Pneumonia

Influenza and pneumonia, combined, have had a death rate below the previous minimum in all but two months this year, with the result that the cumulative death rate, for the first nine months, is only 60.5 per 100,000. This may be compared with the previous low of 81.5 recorded for this period of the year in 1934, or with the average figure of 98.8 reported for the January-September period in the preceding 10 years. The full significance of this year's experience is not yet clear. It is to be hoped that a part of the decline in the rate is permanent, and indicates the success achieved by the more extensive use of serum in the treatment of pneumonia. This conclusion is suggested by the fact that, for the policyholders as a whole, the greatest decline has occurred in the age group 15 to 64, where the use of serum is most common.

Drop in the Death Rate from Cardiovascular-renal Diseases

Accompanying the decrease in the deaths from influenza and pneumonia this year is a drop in death rate for the three principal cardiovascular-renal diseases. While the declines are much less marked than that for influenza and pneumonia, the rate for heart disease is nevertheless down 4.4 percent, that for cerebral hemorrhage 2.4 percent, and that for chronic nephritis 3.6 percent. Since these diseases are among the most important numerically, even a small reduction in their rate contributes materially to a decrease in the total mortality.

Deaths from Puerperal Conditions Show Decline

Another favorable feature of the year's report which may be connected with the relatively low incidence of influenza, is the continued decline in the death rate from diseases of the puerperal state. The figure for the first nine months of 1938 is 10.1 percent below that of last year, and 56.9 percent below that of 10 years ago. Although the improvement in this mortality over the last decade is partly due to the fall in the birth rate, with the accompanying decrease in the number of women exposed to the hazards of pregnancy and childbirth, all of it cannot be attributed to this cause. In fact, the decline in birth rate from 1928 to 1937 was only slightly more than 14 percent, while provisional figures indicate that there was a slight rise in the birth

rate in the United States in the first six months of 1938. From these facts it is quite obvious that there has been a real and very substantial decrease in the dangers of childbirth for the women of the United States.

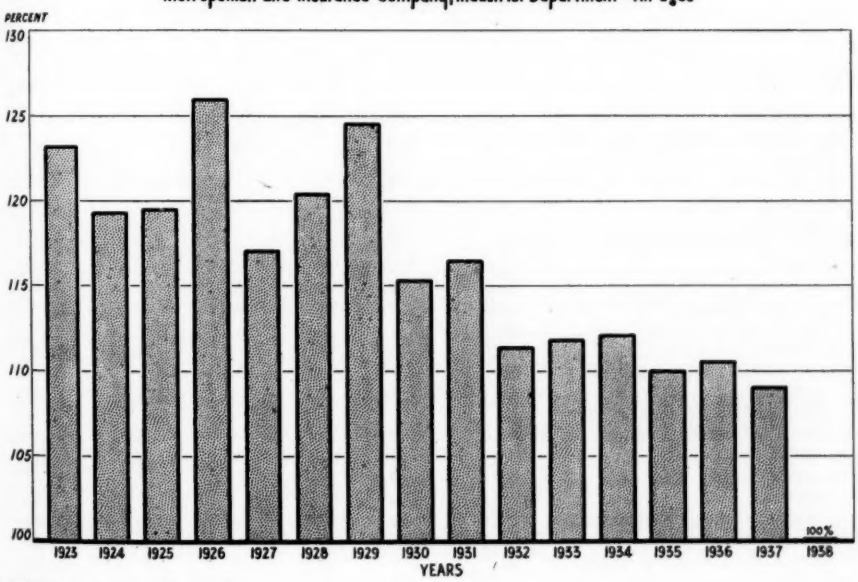
Marked Decline in Tuberculosis

The continued decline in the mortality from tuberculosis is another feature of interest at this time. As was noted in the July issue of the STATISTICAL BULLETIN, at the end of the first six months the decline in the tuberculosis death rate this year is larger than in any recent one. The slight slackening in the downward trend of the death rate, which was noted with some concern for several years after 1933, now has every appearance of having been a false alarm. It is now fairly certain that 1938 will establish a rate of less than 50 per 100,000 among total policyholders, and one of approximately 35 per 100,000 among white policyholders. It is with a feeling akin to disbelief that we recall that as recently as 1911 the tuberculosis death rate among Industrial policyholders was 225 per 100,000.

MORTALITY FROM ALL CAUSES

First nine months 1938 compared with like periods of 1923 to 1937

Metropolitan Life Insurance Company, Industrial Department*. All ages



* Weekly premium-paying business

Communicable Diseases of Childhood

Three out of four of the principal communicable diseases of childhood have registered declines so far this year. Measles, the single exception, was unusually prevalent last spring,

and the comparatively high rates reported then, approximately four per 100,000 in March and April, are responsible for a cumulative rate slightly above the low figures recorded in 1936 and 1937. The scarlet fever death rate dropped 29.4 percent in the first nine months of

Death Rates per 100,000 Persons Exposed. First Nine Months of 1937 and 1938 Compared. By Color for Principal Causes of Death. All Ages. Metropolitan Life Insurance Company. Industrial Weekly Premium-Paying Business*

Causes of Death	Death Rates per 100,000 Persons Exposed*					
	Total		White		Colored	
	Jan.-Sept. 1938	Jan.-Sept. 1937	Jan.-Sept. 1938	Jan.-Sept. 1937	Jan.-Sept. 1938	Jan.-Sept. 1937
Total—All Causes	773.5	842.8	706.7	773.2	1296.5	1386.7
Typhoid fever	1.0	.9	.8	.7	2.5	2.1
Communicable diseases of childhood	6.9	7.6	7.2	7.7	4.4	6.7
Measles	2.0	1.2	2.2	1.2	1.0	1.1
Scarlet fever	1.2	1.7	1.4	1.8	.3	.5
Whooping cough	2.2	3.3	2.2	3.2	2.1	4.0
Diphtheria	1.4	1.5	1.5	1.6	.9	1.1
Influenza and pneumonia	60.5	92.4	54.6	81.2	107.1	179.1
Influenza	7.4	21.0	6.2	17.8	16.5	45.5
Pneumonia (all forms)	53.1	71.4	48.3	63.4	90.6	133.6
Bronchopneumonia	22.6	27.6	21.7	26.1	30.2	39.8
Lobar and undefined	30.5	43.7	26.7	37.3	60.3	93.8
Tuberculosis (all forms)	47.6	53.0	35.8	40.0	139.6	153.8
Tuberculosis of the respiratory system	42.5	47.6	32.1	36.1	123.8	137.4
Syphilis, locomotor ataxia, and general paralysis of the insane	11.0	10.9	6.5	6.6	46.2	43.9
Cancer (all forms)	95.4	93.4	93.9	93.1	107.6	95.6
Diabetes mellitus	24.4	25.3	24.0	25.0	27.7	27.5
Alcoholism	1.4	1.9	1.3	1.6	2.3	3.8
Cerebral hemorrhage; apoplexy	57.6	59.0	49.5	52.0	120.8	113.4
Diseases of the heart†	151.8	158.8	138.1	145.5	259.1	262.3
Diseases of the coronary arteries	33.1	29.9	33.9	31.0	27.5	21.3
Angina pectoris	6.8	7.9	6.8	7.8	6.3	8.3
Diarrhea and enteritis	7.3	9.0	7.0	9.0	9.5	8.9
Appendicitis	10.6	11.2	10.4	11.3	12.0	10.7
Chronic nephritis (Bright's disease)	53.1	55.1	45.4	47.9	113.3	111.8
Puerperal state—total	6.2	6.9	5.6	6.2	11.2	12.3
Total external causes	61.7	67.6	58.5	63.8	86.9	96.9
Suicides	9.2	8.8	9.6	8.9	6.2	7.7
Homicides	4.3	4.7	2.0	2.1	22.6	24.9
Accidents—total	48.2	54.0	47.0	52.7	58.1	64.3
Automobile accidents	16.9	20.2	16.6	20.1	19.6	20.5
All other diseases and conditions	137.1	152.4	127.5	142.6	212.5	228.2

*The rates for 1938 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes pericarditis, acute endocarditis, acute myocarditis, coronary artery diseases, and angina pectoris.

1938, as compared with 1937, and that for whooping cough 33.3 percent. Diphtheria, which has been running at a remarkably low level in recent years, dropped 6.7 percent, to establish a new low for the January-September period of the year. Another important disease of children, diarrhea and enteritis, is down sharply and will, undoubtedly, also establish a new minimum figure for the year.

Increases in Rate Recorded for a Few Causes

The list of important causes showing increases in rate in 1938, as compared with 1937, is short, including as it does only cancer, diseases of the coronary arteries, and suicides. Cancer, numerically the chief of these three, is up 2.1 percent. Even so the rate is still about the average of the past five years. Diseases of the coronary arteries, which have increased steadily since 1930, when their statistical segregation was first made, are up 10.7 percent, and will again strike a new high. Suicides, which had declined steadily since 1933, are now up 4.5 percent, and back to the level obtaining at the end of 1935.

External Causes

The year-to-date rate for homicides has continued on a downward trend, and is now 8.5 percent below the previous minimum recorded last year. The accident death rate is running lower than ever before. This is due in part to a drop in automobile fatalities, although reduced industrial activity in 1938 is no doubt partly responsible. The drop in the death rate from accidents other than automobile accidents, is 7.4 percent, while automobile fatalities are down 16.3 percent.

It now appears that no less than 10 causes, namely, scarlet fever, diphtheria, influenza and pneumonia, tuberculosis, diarrhea and enteritis, appendicitis, chronic nephritis, diseases of pregnancy and childbirth, homicides, and accidents will establish new low records in 1938.

The Conference for the Revision of the International Classification of Causes of Death

THE International Conference which meets every 10 years for the revision of the classification of causes of death, met again in Paris, October 3–7, 1938. One of the changes adopted by the Conference reflected the war clouds which were hovering over Paris and other European capitols on the eve of the meeting. It was decided that hereafter, in time of war, it will be necessary in classifying mortality to take account separately of the number of deaths from poison gas and from wounds arising out of war, not only among persons in the military service, but also among civilians. It was the consensus of opinion among the vital statisticians present that in the future war will take a far greater

toll among civilian populations than ever before and that large numbers of deaths among civilians will result from wounds in bombardments and from poison gas.

While this feature, being intimately related to the recent critical situation in Europe, naturally attracts attention, the more essential developments of the Conference related to readjustments in the classification of diseases. In particular, a change in the rubrics relating to diseases of the heart will enable vital statisticians henceforth to tabulate separately the various types of cardiac lesions in which rheumatism is a reported factor.

Another important change affects what is known as Group I of the present classification, "infectious and parasitic diseases". This group will henceforth be subdivided into subgroups in order to enable vital statisticians to show the total number of deaths ascribed to diseases due to (*a*) bacteria, (*b*) protozoa, (*c*) spirochaetes, (*d*) filtrable viruses, (*e*) rickettsiae, (*f*) helminths, (*g*) fungi.

Readjustment of the titles relating to pregnancy, childbirth, and the puerperal state will make important data available to those interested in mortality statistics for these conditions, which hitherto they have not been able to obtain. For example, in deaths resulting from abortions, account will be taken of those induced for therapeutic reasons and those otherwise induced by the woman herself or by other persons; and deaths reported from puerperal hemorrhage will be classified to show whether hemorrhage occurred before, during, or after childbirth.

Aside from the changes mentioned, the International Classification, as now revised for use during the coming decade, will correspond in most important respects to that now in use. There will be exactly the same number (namely, 200) of titles or general headings under which deaths from the various diseases and types of violence will be segregated for purposes of mortality statistics.

This 1938 meeting of the International Commission for the Decennial Revision of the International Nomenclature of Diseases marked the fifth revision of the International List. These Conferences are held every 10 years because, on account of the steady advancement of medical science, periodic changes are necessary in order to keep the classification of diseases throughout the world abreast with the latest medical knowledge.

As was noted in the opening paragraph, the 1938 International Conference was held under decidedly less favorable conditions than those attending previous similar Conferences. Many nations which had sent delegates to the last previous meeting were not represented this year, perhaps because of the threatening international situation. Among these were Brazil, British India, China, Spain, Japan, Mexico, Persia, Poland, Sweden, Czechoslovakia, and Russia. Actually represented were the United States, France, Germany, Belgium, Canada,

Denmark, Great Britain, Australia, New Zealand, Hungary, Italy, Norway, Paraguay, the Netherlands, Roumania, Turkey, Venezuela, and Algeria. Eighteen nations or dominions participated, as compared with 34 in the latest previous conference, held in 1929. In addition, delegates from the International Labor Bureau and the League of Nations attended.

While a number of countries had given more or less preliminary consideration to the problems inherent in revising the International List, America and Great Britain were the outstanding nations to give this subject very special study. Each sent to the meeting a group of delegates chosen for demonstrated efficiency in medical statistics. The tentative programs of America and Great Britain were in agreement in practically every important particular. A conference between the two delegations was held and many minor differences were adjusted. As a result, combined American and British opinion was dominant at the 1938 Conference, and the fifth revision of the International Classification, as finally adopted, is for the most part a reflection of the suggestions advanced by these countries.

It is particularly gratifying that the American delegation played such an important part in the 1938 International Conference. The United States sent seven representatives, four of whom are members of the American Public Health Association's Committee on Accuracy of Certified Causes of Death. This is the third such conference for which this Committee, formed 23 years ago, has been charged with the responsibility of preparing the American recommendations for revision of the International List.

These Conferences, held every ten years, are slowly but surely making our vital statistics an indispensable adjunct of progressive medicine and effective health work, because, more and more accurately and more and more fully the statistics throughout the civilized world reflect modern advances in medicine and the achievements of the public health worker.

Health Record for September

In September, for the first time in the history of the Company, the premium-paying Industrial policyholders recorded a death rate below seven per 1,000. The actual figure of 6.8 per 1,000 is 3.7 percent below the exceptionally low rate of last September and the equally low rate reported in August of this year.

The year-to-date figures available indicate that 1938 has been a favorable health year for the general population also. Reports received during the first four weeks of September concerning the prevalence of communicable diseases throughout the general population of the United States show that there was more sickness from diphtheria, influenza, and scarlet fever than was reported

in either August of this year or in September 1937. On the other hand, there were fewer cases of measles, poliomyelitis, smallpox, and typhoid fever than in either August of this year or September a year ago. The incidence of poliomyelitis was less than 10 percent of that recorded in September last year.

In sharp contrast to the exceptionally high incidence of smallpox in the early part of the year, only 163 cases of the disease were reported in September by 47 States and the District of Columbia. Perhaps the low incidence, at this time, is indirectly attributable to the unusual epidemic of last winter and spring. It may be that the increase in the number of persons vaccinated has helped to bring about a subsidence of the disease.

Items of special public health interest recently reported follow:

A committee has been appointed by the University of Chicago to work out its cancer program for research and clinical treatment. This committee will operate as a cancer institute and will correlate all basic research with the efforts of the clinical departments, and it will serve as a clearing house for all the university investigators in nine departments.

According to a recent announcement by the New York State Department of Health, a series of conferences will be conducted in cities of up-State New York during the month of October, for the personnel of unincorporated maternity homes and institutions caring for children. Maternal and child care as a factor in the prevention of communicable diseases will be discussed.

A committee has been appointed by the National Research Council of Canada to study the organization of medical research in the Dominion. Part of the program will include a survey of work in progress at the various centers in order to develop the activities of the various institutions concerned.

A grant of $50,000 made by the Commonwealth Fund to the Michigan Department of Health has made possible a pneumonia program in that State which will cover experimentation with the production of anti-pneumococcus serum for distribution to residents of Michigan. An additional appropriation of $30,000 was made by the last State Legislature. The distribution of the State serum will begin this fall but will be restricted to those for whom serum is otherwise not available.

The United States Public Health Service, in cooperation with State and local health departments, has established field research projects in seven States for an intensive investigation of the treatment and spread of pneumonia. Studies will be made in New Jersey, Pennsylvania, Illinois, and a selected north central area in California, and the cities of St. Louis, Denver, and New Orleans. This project will cover the study of incidence by type, effectiveness of different serums in reducing the mortality, and the effectiveness of certain chemical substances in treatment.

The following table shows the mortality among Industrial policyholders for September 1938, August 1938, and September 1937, together with the death rates for the first nine months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Death Rate per 100,000 for Principal Causes. Weekly Premium-Paying Business in Industrial Department. All Ages (Annual Basis).*

MONTHS OF SEPTEMBER 1938, AUGUST 1938, AND SEPTEMBER 1937

CAUSES OF DEATH	ANNUAL RATE PER 100,000 LIVES EXPOSED*				
	September 1938	August 1938	September 1937	Cumulative January-September 1938	Cumulative January-September 1937
TOTAL—ALL CAUSES	676.5	702.4	702.6	773.5	842.8
Typhoid fever	1.6	1.5	1.7	1.0	.9
Measles	—	.1	.5	2.0	1.2
Scarlet fever	.1	.3	.5	1.2	1.7
Whooping cough	3.0	1.9	2.8	2.2	3.3
Diphtheria	1.0	1.0	1.0	1.4	1.5
Influenza	2.1	2.0	2.3	7.4	21.0
Tuberculosis (all forms)	42.8	43.8	43.6	47.6	53.0
Tuberculosis of respiratory system	37.8	39.5	39.2	42.5	47.6
Syphilis, locomotor ataxia, and general paralysis of the insane	8.8	10.6	9.8	11.0	10.9
Cancer (all forms)	88.6	95.8	90.4	95.4	93.4
Diabetes mellitus	20.8	19.5	22.0	24.4	25.3
Cerebral hemorrhage; apoplexy	48.7	52.6	50.7	57.6	59.0
Diseases of the heart†	127.9	128.7	123.5	151.8	158.8
Diseases of the coronary arteries	29.0	31.5	29.3	33.1	29.9
Angina pectoris	5.8	4.4	6.8	6.8	7.9
Pneumonia (all forms)	27.3	25.1	23.4	53.1	71.4
Diarrhea and enteritis	11.4	10.5	17.8	7.3	9.0
Appendicitis	10.9	10.8	12.0	10.6	11.2
Chronic nephritis (Bright's disease)	42.8	47.2	46.1	53.1	55.1
Puerperal state—total	5.9	6.0	5.9	6.2	6.9
Suicides	8.4	9.3	9.1	9.2	8.8
Homicides	4.0	4.6	4.3	4.3	4.7
Accidents—total	50.7	55.2	54.8	48.2	54.0
Automobile accidents	18.4	18.5	22.9	16.9	20.2
All other diseases and conditions	135.0	139.9	144.5	138.5	154.2

*The rates for 1938 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes pericarditis, acute endocarditis, acute myocarditis, coronary artery diseases, and angina pectoris.

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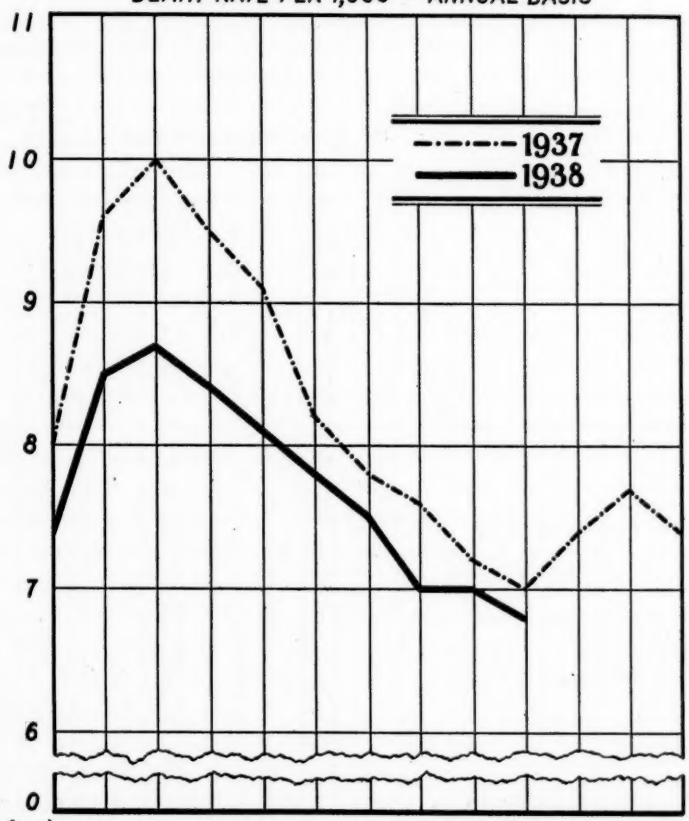
DEATH RATES FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE COMPANY
INDUSTRIAL DEPARTMENT
WEEKLY PREMIUM-PAYING BUSINESS – TOTAL PERSONS

DEATH RATE PER 1,000 – ANNUAL BASIS



(DEC)	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
1937	9.6	10.0	9.5	9.1	8.2	7.8	7.6	7.2	7.0	7.4	7.7	7.4
1938*	8.5	8.7	8.4	8.1	7.8	7.5	7.0	7.0	6.8			

Rates are provisional

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